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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,829	02/25/2005	Peter James Duffett-Smith	48348	9178

7590 08/21/2006

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EXAMINER	
GUZMAN, APRIL S	
ART UNIT	**PAPER NUMBER**
2631	

DATE MAILED: 08/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/525,829	DUFFETT-SMITH ET AL.	
	Examiner	Art Unit	
	April S. Guzman	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 25 February 2005.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 25 February 2005 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 02/25/2005.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement submitted on February 25, 2005 has been considered by the Examiner and made of record in the application file.

Preliminary Amendment

3. The present Office Action is based upon the original patent application filed on February 25, 2005 as modified by the preliminary amendment filed on February 25, 2005. **Claims 1-21** are now pending in the present application.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 20 claims a program code means embodied on a computer-readable medium; however, the specification does not specifically mention that the computer-readable medium is of statutory subject manner.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1-2, 5-15, and 17-21** are rejected under 35 U.S.C. 102(e) as being anticipated by **Tsunehara et al. (U.S. Patent # 6,459,402)**.

Consider **claim 1, claim 14, claim 17, and claim 20** Tsunehara et al. show and disclose a method, an apparatus, a telecommunications terminal, and a program code for estimating the time offsets between signals transmitted by plural transmitters of a communications network and received by a receiver attached to a terminal, the method comprising steps of, the apparatus comprising, and program code means embodied on a computer-readable medium adapted to (A position measuring method, apparatus, telecommunications terminal to calculate the foregoing reference timing for at least three signal transmitting stations, then calculate the differences in send timing between the corresponding signal transmitting stations, and detect the position of the signal receiving station from the respective relative time differences. Program code is implicit within the apparatus in order to perform the method.) (column 2 lines 19-25, and column 8 lines 27-29)

creating a terminal section of a representation of the signals from the plural transmitters received by the receiver at the terminal (In first step 500, the correlation value between the received wave and the PN code is calculated and delay profile 202 or delay profile 12 is created, wherein the delay profile is a profile created that shows the values corresponding to the correlation values in each receiving event) (Figure 2, Figure 4, Figure 11, column 2 lines 57-59, column 8 lines 30-32, column 8 lines 65-67, and column 9 lines 1-5);

creating a first section of a representation of the signal transmitted by a first of said transmitters, and creating a second section of a representation of the signal transmitted by a second of said transmitters, each of which sections overlaps in time with the terminal section (The delay profiles 10 and 11 corresponding to incoming waves 1 and 2, respectively; in step 501, first threshold value 206 required for making a distinction between incoming waves and noise. In step 502, among all the timing that the correlation value becomes equal to the first threshold value 206, only the earliest receiving timing 205 is detected. In step 503, second threshold value 207 is used to detect the timing in which the delay profile is started up from the noise level. In step 504, among all the timing that the correlation values becomes equal to the foregoing second threshold value 207, on the receiving timing 208 closest to and earlier than the first threshold value timing 205 is detected as reference timing 208) (Plurality of incoming waves are received in overlapping form.) (Figure 2, Figure 4, column 2 lines 1-20, column 2 lines 60-67, column 6 lines 24-26, column 6 lines 54-56, column 8 lines 46-56, and column 9 lines 8-16);

using the first section, the second section and a set of signal parameters, including initial estimates of the time offsets between the first section and the terminal section and between the second section and the terminal section, to create a model of a section of a representation of the composite signal received by the receiver from the first and second transmitters (The second threshold value 331 received from the second threshold value calculation section 107, the receive timing detection results received from the first threshold value timing detection section 103, and the delay profile received from delay profile holding section 115 are used for reference timing for obtaining the receive timing of the incoming wave of the minimum propagation delay time) (Figure 1, Figure 7, Figure 8, column 5 lines 42-49, column 8 lines 33-41, and column 9 lines 19-28);

comparing the model with the terminal section (Reference timing calculation section 106 compares the correlation value and threshold value 207 in the receive timing 205 that has been received from the first threshold value timing detection section 103. If both values mismatch, the receive timing is advanced and the correlation value and threshold value 207 in said receive timing are compared) (Figure 1, Figure 4, and column 5 lines 53-59);

refining the set of signal parameters including the time offset estimates to minimize the difference between said model and the terminal section (The sequence of comparing the advanced receive timing and the correlation value and threshold value 207 in said receive timing is repeated until the correlation value and threshold value 207 have matched, and the corresponding receive timing is sent as an output. Receive

timing 208 in which the correlation value and threshold value 207 match is sent as reference timing to signal line 112) (Figure 4, and column 5 lines 59-65); and

adopting the time offsets in the refined parameter set used to minimize the difference between said model and the terminal section, as the estimated time offsets between the first section and the terminal section and between the second section and the terminal section (The reference timing received from reference timing calculation section 106 via signal line 112 is used for receive timing calculation section 108 to calculate the receive timing for the signal wave or incoming wave of the minimum propagation delay time. Timing 210 delayed by previously set timing 209 behind the reference timing 208 that has been sent from reference timing calculation section 106 is detected as the receive timing for the wave of the minimum propagation delay time, and the detected receive timing is then sent to signal line 113) (Figure 1, Figure 4, column 5 lines 66-67, and column 6 lines 1-10).

Consider **claim 2**, and **as applied to claim 1 above**, Tsunehara et al. disclose the first section, the second section, and the terminal section are created by sampling the respective signals at sample times according to a predetermined sampling rate (Step for creating independent delay profiles from the signal waves received from at least three signal transmitting stations and step for detecting a startup timing of each said delay profile as a reference timing, where in the startup timing corresponds to a timing when a correlation value of the delay profile is equal to a predetermined threshold value) (column 7 lines 28-35).

Consider **claim 5**, and **as applied to claim 1 above**, Tsunehara et al. disclose the first and second sections are created at the respective first and second transmitters (Delay profiles are created using the signal waves received from at least three signal transmitting stations, and then the first and second threshold values are created for each such delay profile. The startup timing of each delay profile is detected and the differences in send timing between the corresponding signal transmitting stations are used for the receiving station to measure its position from the relative time differences between the signal transmitting stations) (column 6 lines 44-52).

Consider **claim 6**, and **as applied to claim 1 above**, Tsunehara et al. show and disclose the first and second sections are created in one or more sampling devices attached to the respective transmitters (The spread spectrum signal that has been received by antenna 100 by the transmitting stations is sent to signal receiving section 101 then further sent to delay profile creating section 101 using a matched filter 200 which calculates the correlation value between the received spread spectrum and the PN code, created by PN code generator 201, for each receiving event transmitting by each transmitting station) (Figure 1, Figure 3, and column 3 lines 39-57).

Consider **claim 7**, and **as applied to claim 1 above**, Tsunehara et al. disclose the first and second sections are created by computer programs using information supplied from the network about the transmitted signals (The spread spectrum signal that has been received by antenna 100 by the transmitting stations is sent to signal receiving section 101 then further sent to delay profile creating section 101 using a matched filter 200 which calculates the correlation value between the received spread

spectrum and the PN code, created by PN code generator 201, for each receiving event transmitting by each transmitting station. Computer program is implicit within the apparatus that carries out the method using information from the communications network.) (Figure 1, Figure 3, and column 3 lines 39-57).

Consider **claim 8**, and **as applied to claim 1 above**, Tsunehara et al. show and disclose the signal representation sections are sent to one or more computing devices in which said estimates are calculated (The reference timing received from reference timing calculation section 106 via signal line 112 is used for receive timing calculation section 108 to calculate the receive timing for the signal wave that has first arrived at the terminal equipment or the incoming wave of the minimum propagation delay time) (Figure 1, column 5 lines 66-67, and column 6 lines 1-4).

Consider **claim 9**, and **as applied to claim 8 above**, Tsunehara et al. show and disclose the terminal location is calculated in said one or more computing devices (Timing 210 delayed by previously set timing 209 behind the reference timing 208 that has been sent from reference timing calculation section 106 is detected as the receive timing for the wave of the minimum propagation delay time, and the detected receive timing is then sent to signal line 113) (Figure 1, Figure 4, and column 6 lines 5-10).

Consider **claim 10**, and **as applied to claim 8 above**, Tsunehara et al. disclose the one or more computing devices are in the or another terminal (The reference timing received from reference timing calculation section 106 via signal line 112 is used for receive timing calculation section 108 to calculate the receive timing for the signal wave

that has first arrived at the terminal equipment or the incoming wave of the minimum propagation delay time) (Figure 1, column 5 lines 66-67, and column 6 lines 1-4).

Consider **claim 11**, and **as applied to claim 1 above**, Tsunehara et al. show and disclose the terminal section of the representation of the signals received by the receiver at the terminal is recorded in the terminal before being sent to a computing device (The delay profile that has been created by delay profile creating section 102 is then held in delay profile holding section 115. The delay profile, after being held in delay profile holding section 115, is sent to the first threshold value timing detection section 103, the first threshold value calculation section 105, reference timing calculation section 106, and the second threshold value calculation section 107) (Figure 1, column 3 lines 65-67, and column 4 lines 1-6).

Consider **claim 12**, and **as applied to claim 1 above**, Tsunehara et al. show and disclose the terminal section of the representation of the signals received by the receiver at the terminal is transferred in real time to the computing device and a recording made there (The delay profile that has been created by delay profile creating section 102 is then held in delay profile holding section 115. The delay profile, after being held in delay profile holding section 115, is sent to the first threshold value timing detection section 103, the first threshold value calculation section 105, reference timing calculation section 106, and the second threshold value calculation section 107) (Figure 1, column 3 lines 65-67, and column 4 lines 1-6).

Consider **claim 13**, and **as applied to claim 1 above**, Tsunehara et al. disclose the step of calculating the position of a mobile terminal in a communication network

using the estimated time offsets (To measure position, it is necessary to calculate the foregoing reference timing for at least three signal transmitting stations, then calculate the differences in send timing between the corresponding signal transmitting stations, and detect the position of the signal receiving station from the respective relative time differences (column 2 lines 19-25).

Consider **claim 15**, and **as applied to claim 14 above**, Tsunehara et al. disclose a sampling device or devices in which the first section, the second section, and the terminal section are created by sampling the respective signals at sample times according to a predetermined sampling rate (delay profile creating section 102 using matched filter 200 creates independent delay profiles from the signal waves received from at least three signal transmitting stations and detects a startup timing of each said delay profile as a reference timing, where in the startup timing corresponds to a timing when a correlation value of the delay profile is equal to a predetermined threshold value) (Figure 1, Figure 3, column 3 lines 39-57, and column 7 lines 28-35).

Consider **claim 18**, and **claim 19, as applied to claim 18 above,** Tsunehara et al. disclose a communications network for finding the time offsets between signals transmitted by a plurality of transmitters of the communications network and received by a receiver attached to a terminal, and a computing device or devices for use in a communications network (The communications network is implicit within the method for finding the foregoing reference timing for at least three signal transmitting stations, then calculate the differences in send timing between the corresponding signal transmitting stations, and detect the position of the signal receiving station from the respective

relative time differences), the network comprising and the computing device being adapted to

a computing device or devices (receive timing calculation section 108) (Figure 1, column 5 lines 66-67, and column 6 lines 1-4);

a terminal having a receiver attached to the terminal, processing means arranged to create a terminal section of a representation of the signals from plural transmitters received by the receiver at the terminal, and means for sending the section to the computing device or devices (The correlation value between the received wave and the PN code is calculated and delay profile 202 or delay profile 12 is created, wherein the delay profile is a profile created that shows the values corresponding to the correlation values in each receiving event. The reference timing received from reference timing calculation section 106 via signal line 112 is used for receive timing calculation section 108 to calculate the receive timing for the signal wave that has first arrived at the terminal equipment or the incoming wave of the minimum propagation delay time.) (Figure 1, Figure 2, Figure 4, Figure 11, column 2 lines 57-59, column 5 lines 66-67, column 6 lines 1-4, column 8 lines 30-32, column 8 lines 65-67, and column 9 lines 1-5);

sampling devices associated with respective first and second ones of said transmitters for creating respective first and second sections of representations of the signals transmitted by a first and a second of said transmitters, each of which sections overlaps in time with the terminal section, and for sending the sections of representations to the computing device or devices (The spread spectrum signal that has been received by antenna 100 by the transmitting stations is sent to signal receiving

section 101 then further sent to delay profile creating section 101 using a matched filter 200 which calculates the correlation value between the received spread spectrum and the PN code, created by PN code generator 201, for each receiving event transmitting by each transmitting station. The reference timing received from reference timing calculation section 106 via signal line 112 is used for receive timing calculation section 108 to calculate the receive timing for the signal wave that has first arrived at the terminal equipment or the incoming wave of the minimum propagation delay time.) (Plurality of incoming waves are received in overlapping form.) (Figure 1, Figure 3, column 3 lines 39-57, column 5 lines 66-67, column 6 lines 1-4, column 6 lines 24-26, and column 6 lines 54-56);

the computing device or devices (receive timing calculation section 108) (Figure 1, column 5 lines 66-67, and column 6 lines 1-4) being adapted to

create a model of a section of a representation of the composite signal received by the receiver from the first and second transmitters using the first section, the second section and a set of signal parameters, including initial estimates of the time offsets between the first section and the terminal section and between the second section and the terminal section (The delay profiles 10 and 11 corresponding to incoming waves 1 and 2 , respectively; In step 501, first threshold value 206 required for making a distinction between incoming waves and noise. In step 502, among all the timing that the correlation value becomes equal to the first threshold value 206, only the earliest receiving timing 205 is detected. In step 503, second threshold value 207 is used to detect the timing in which the delay profile is started up from the noise level. In step

504, among all the timing that the correlation values become equal to the foregoing second threshold value 207, on the receiving timing 208 closest to and earlier than the first threshold value timing 205 is detected as reference timing 208. The second threshold value 331 received from the second threshold value calculation section 107, the receive timing detection results received from the first threshold value timing detection section 103, and the delay profile received from delay profile holding section 115 are used for reference timing for obtaining the receive timing of the incoming wave of the minimum propagation delay time.) (Plurality of incoming waves are received in overlapping form.) (Figure 1, Figure 2, Figure 4, Figure 7, Figure 8, column 2 lines 1-20, column 2 lines 60-67, column 5 lines 42-49, column 6 lines 24-26, column 6 lines 54-56, column 8 lines 33-41, column 8 lines 46-56, column 9 lines 8-16, and column 9 lines 19-28);

compare the model with the terminal section (Reference timing calculation section 106 compares the correlation value and threshold value 207 in the receive timing 205 that has been received from the first threshold value timing detection section 103. If both values mismatch, the receive timing is advanced and the correlation value and threshold value 207 in said receive timing are compared) (Figure 1, Figure 4, and column 5 lines 53-59);

refine the set of signal parameters including the time offset estimates to minimize the difference between said model and the terminal section (The sequence of comparing the advanced receive timing and the correlation value and threshold value 207 in said receive timing is repeated until the correlation value and threshold value 207

have matched, and the corresponding receive timing is sent as an output. Receive timing 208 in which the correlation value and threshold value 207 match is sent as reference timing to signal line 112) (Figure 4, and column 5 lines 59-65); and

adopt the time offsets in the refined parameter set, used to minimize the difference between said model and the terminal section, as the estimated time offsets between the first section and the terminal section and between the second section and the terminal section (The reference timing received from reference timing calculation section 106 via signal line 112 is used for receive timing calculation section 108 to calculate the receive timing for the signal wave or incoming wave of the minimum propagation delay time. Timing 210 delayed by previously set timing 209 behind the reference timing 208 that has been sent from reference timing calculation section 106 is detected as the receive timing for the wave of the minimum propagation delay time, and the detected receive timing is then sent to signal line 113) (Figure 1, Figure 4, column 5 lines 66-67, and column 6 lines 1-10).

Consider **claim 21**, and **as applied to claim 1 above**, Tsunehara et al. disclose the step of tracking a moving mobile terminal in a communications network by periodically estimating and using the estimated time offsets (A position measuring method to calculate the foregoing reference timing for at least three signal transmitting stations, then calculate the differences in send timing between the corresponding signal transmitting stations, and detect the position of the signal receiving station from the respective relative time differences) (column 2 lines 19-25, and column 8 lines 27-29).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. **Claims 3-4, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsunehara et al. (U.S. Patent # 6,459,402)** in view of **Parl et al. (U.S. Patent # 5,883,598)**.

Consider **claim 3, as applied to claim 2 above, and claim 16, as applied to claim 14 above**, Tsunehara et al. show and disclose a method and apparatus for estimating the time offsets between signals transmitted by plural transmitters of a communication network and received by a receiver attached to a terminal, wherein the first section, the second section and the terminal section are created by sampling the respective signals at sample times according to a predetermined sampling rate (A position measuring method to calculate the foregoing reference timing for at least three signal transmitting stations, then calculate the differences in send timing between the corresponding signal transmitting stations, and detect the position of the signal receiving station from the respective relative time differences, and step for creating independent delay profiles from the signal waves received from at least three signal transmitting stations and step for detecting a startup timing of each said delay profile as a reference timing, where in the startup timing corresponds to a timing when a correlation value of the delay profile is equal to a predetermined threshold value) (column 2 lines 19-25, column 7 lines 28-35, and column 8 lines 27-29).

However, Tsunehara et al. fail to disclose that at least the first section is scaled by a first initial complex amplitude value and delayed by a first initial time delay and the second section is scaled by a second initial complex amplitude value and delayed by a second initial time delay, where after the scaled and delayed first and a second sections are used to build an adjustable representation or model of the combined signal from the first and second transmitters received by the receiver, the model of the combined signal from the first and second transmitters received by the receiver is subtracted from the

terminal section to produce a time series containing the complex difference at each sample time, and wherein the squares of the amplitudes of the complex difference at each sample time are added to produce a single real value representative of the overall difference between the model and the target signal or set of signals.

In the related art, Parl et al. show and disclose the portable unit 20 transmits a locating signal in all directions in the region 14. The locating signal can be a pair of single-frequency tones transmitted one at a time in succession or simultaneously. The locating signal is received by several of the base stations 12 which generate representative signals indicative of various attributes of the locating signal as received at the base stations. The representative signal generated by each base station preferably contains information related to the amplitude and phase of each tone and time of measurement of the locating signal as it is received at that particular base station. The base stations also include preferably two correlation receivers 218, 220, each of which is coupled to a receiver 212, 214, respectively. Each correlations receiver 218, 220 measures the phase and amplitude of the two tones received from a portable unit 20 relative to the corresponding two base station tones generated by the local signal generator 216. The outputs from the correlations receiver 218, 220 are complex phasors optionally offset in time and frequency. The output is provided by taking the offset measurement at a prearranged time coordinated by the control station 22. The output of the base stations is used at the control station 22 to compute the estimated location of the portable unit 20. (Figure 1, column 5 lines 17-28, column 8 lines 30-43, and column 11 lines 36-45)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Tsunehara et al. to incorporate the teachings of Parl et al. for the purpose of de-emphasizing the effects of signals interfered with by multipath by having them given less weight, or even eliminated from the computation.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Buford et al. (U.S. Patent # 5,945,948)

Cahn et al. (U.S. Patent # 6,047,017)

Drane et al. (U.S. Patent # 6,275,705)

Duffett-Smith et al. (U.S. Patent Publication Application # 2002/0160788)

Tsunehara et al. (U.S. Patent # 6,657,579)

Fukuzawa et al. (U.S. Patent # 6,701,132)

Townsend et al. (U.S. Patent # 6,788,251)

Duffett-Smith et al. (U.S. Patent Publication Application # 2004/0196186)

Tsunehara et al. (U.S. Patent # 6,900,753)

Duffett-Smith et al. (U.S. Patent # 6,894,644)

Cahn et al. (U.S. Patent # 6,917,644)

Duffett-Smith et al. (U.S. Patent Publication Application # 2005/0200525)

Duffett-Smith et al. (U.S. Patent # 6,094,168)

Duffett-Smith et al. (U.S. Patent # 6,342,854)

Amerga et al. (U.S. Patent Publication Application # 2002/0115448)

Ruutu et al. (U.S. Patent # 6,445,928)

Haataja et al. (U.S. Patent Publication Application # 2002/0149518)

Tsunehara et al. (U.S Patent #6,484,034)

Duffett-Smith et al. (U.S. Patent # 6,529,165)

Tsunehara et al. (U.S. Patent Publication Application # 2003/0050079)

Karr et al. (U.S. Patent Publication Application # 2003/0146871)

Ogino et al. (U.S. Patent # 6,889,051)

Duffett-Smith et al. (U.S. Patent # 6,937,866)

Diener et al. (U.S. Patent # 7,006,838)

Oda et al. (U.S. Patent Publication Application # 2003/0045303)

Okanoue et al. (U.S. Patent Publication Application # 2003/0064733)

Cedervall et al. (U.S. Patent # 6,671,514)

12. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building

401 Dulany Street
Alexandria, VA 22314

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April S. Guzman
A.S.G/asg

EDAN ORGAD
PATENT EXAMINER/TELECOM
8/16/06

Sheet 1 of 1

DT01 Rec'd PCT/PTO 25 FEB 2005
10/525829

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	ATTY. DOCKET NO. 48348	SERIAL NO. Not Yet Assigned
	APPLICANT Peter J. Duffett-Smith et al.	
	FILING DATE February 25, 2005	GROUP Not Yet Assigned

U.S. Patent Documents

Examiner's Initials		Patent Number	Date	Patentee	Class	Sub-Class	Filing Date
ASG		6,047,017	04/2000	Cahn et al.	375	200	

Published U.S. Patent Application

Examiner's Initials		Publication Number	Publication Date	Patentee	Class	Sub-Class	Filing Date

Foreign Patent Documents or Foreign Patent Applications

Examiner's Initials		Document Number	Publication Date	Country or Patent Office	Class	Sub-Class	Translation Yes	Translation No
ASG		01/65271	09/2001	WO	G01S	1/04		X

Other Documents (including Author, Title, Date, Pertinent Pages, etc.)

ASG		Suzuki H. et al.: "An Orthogonal Successive Interference Canceller for the Downlink Communications in a DS-CDMA Mobile System", GLOBECOM '00, 2000 IEEE Global Telecommunications Conference, San Francisco, CA, Nov. 27 – Dec. 1, 2000, IEEE Global Telecommunications Conference, New York, NY: IEEE, US, Vol. 2 of 4, 27 November 2000 (2000-11-27), pages 847-851.

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw Line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Notice of References Cited	Application/Control No. 10/525,829	Applicant(s)/Patent Under Reexamination DUFFETT-SMITH ET AL.	
	Examiner April S. Guzman	Art Unit 2631	Page 1 of 3

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	Examiner April S. Guzman	Art Unit 2631	Page 2 of 3

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	Examiner April S. Guzman	Art Unit 2631	Page 3 of 3

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